

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently amended): A process for the preparation of aerogels comprising,

- a) exchanging the liquid phase of an aquagel with xenon to form a xenongel; and
- b) extracting xenon from the xenongel ~~xenon-exchanged aquagel~~ of step a) under hypercritical or supercritical drying conditions of xenon; and
- c) optionally, recovering xenon from step b).

Claim 2 (Currently amended): A process for the preparation of aerogels according to claim 1, further comprising, prior to step a), forming an aquagel from a suitable precursor under conditions suitable for hydrolysis/condensation.

Claim 3 (Currently amended): A process for the preparation of aerogels according to claim 2, wherein the suitable precursor is an alkoxyde alkoxide having the formula:



in which Me is a metal belonging to the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> Groups of the Element Periodic Table; n is integer and represents the valence of Me; X is either -OR or -R where -OR is an alkoxyde alkoxide group and -R is an organic radical, linear or branched, having up to 10 carbon atoms.

Claim 4 (Previously presented): A process for the preparation of aerogels according to claim 3 wherein the suitable precursor is tetramethoxysilane or tetraethoxysilane.

Claim 5 (Previously presented): A process for the preparation of aerogels according to claim 3 wherein hydrolysis is in presence of an acid selected from hydrochloric, nitric or acetic acid.

Claim 6 (Currently amended): A process for the preparation of aerogels comprising

- a) forming an aquagel from a suitable precursor ~~under suitable conditions for hydrolysis/condensation;~~
- b) exchanging the liquid phase of an aquagel with liquid xenon;
- c) extracting xenon from the aquagel of step b) under supercritical conditions of ~~xenon~~; and
- d) optionally, recovering xenon from step c).

Claim 7 (Previously presented): A process for the preparation of aerogels according to claim 6 wherein the exchange is carried with liquefied xenon at temperature between 0 and 16.6°C.

Claim 8 (Previously presented): A process for the preparation of aerogels according to claim 6 wherein the super critical conditions include a temperature higher than 16.6°C.

Claim 9 (Previously presented): A process for the preparation of aerogels according to claim 6 wherein the super critical conditions include a pressure higher than 58.4 bar.

Claim 10 (Previously presented): A process for the preparation of aerogels according to claim 1 comprises recovering xenon at the end of the extraction.